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Mold plate production for use in manufacture of chocolate products

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Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
AU 9932358	A	19990826	AU 9918443	A	19990225	199947 B
			AU 9932358	A	19990531	

Priority Applications (No Type Date): AU 987517 A 19981204

Patent Details:

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AU 9932358	A	27	B29C-033/38	Div ex application AU 9918443 Div ex patent AU 706808

Abstract (Basic): AU 9932358 A

NOVELTY - Production of a mold plate comprises irradiating a photopolymeric printing plate (10) with UV radiation through a positive film (8) with an image of the chocolate design on it. The plate is then washed to remove uncured polymer to define a relief mold cavity on the plate. The plate is dried and post-exposed to hardened or uncured polymer

DETAILED DESCRIPTION - Production of a mold plate comprises:

(i) providing an image on a film of the design to be reproduced, contrasting with the film background, whereby either the image or the background is transparent while the other being dark, with a plate of photopolymeric polymer to cure and harden on exposure to UV radiation;

(ii) positioning the film between a UV source and the photopolymeric plate with the film in alignment with the printing plate;

(iii) irradiating the film with UV radiation such that the radiation passes through the transparent areas of the film and irradiates the corresponding portion of the photopolymeric plate, and radiation is blocked by the dark areas on the film so that the corresponding portion of the photopolymeric plate is not irradiated;

(iv) washing the photopolymeric plate to remove soft uncured polymer from the printing plate to define a relief mold; and

(v) drying and post-exposing the photopolymeric plate to give a hard relief mold surface which can be used in the production of chocolate products.

INDEPENDENT CLAIMS are also included for:

(I) the production of a chocolate product; and

(II) a process for reproducing an image from a film on a chocolate product.

USE - For the production of mold plates for use in the production of chocolate products, or for reproducing an image from a film on a chocolate product.

ADVANTAGE - The mold plates can be used to produce very clean and sharp logo image chocolates, e.g. single tone pictures. The cost of

producing the plate is lower than that for an engraved mold plate. It is possible to tool up a mold plate to produce a new design for a chocolate product much quicker than when engraving is used. It can be used to produced photograph-like or real life pictures.

DESCRIPTION OF DRAWING(S) - The figure shows a schematic three dimensional view of a machine for carrying out the process.

Film (8)

Photopolymeric plate (10)

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Technology Focus:

TECHNOLOGY FOCUS - FOOD - Preferred Process: The image on the film is dark and the background is transparent, and the second mold plate is bendable or deformable. The plates are washed for 350-400 seconds during the washing step. UV radiation is directed into the photopolymeric plate at an angle to cause the polymer to cure in an angled line rather than a vertically extending line. The angling of UV radiation is accomplished by placing a transparent sheet over the positive film during irradiation with UV radiation so that the rays of UV radiation are directed inwardly by refraction.

Title Terms: PLATE; PRODUCE; MANUFACTURE; CHOCOLATE; PRODUCT

Derwent Class: A32; A35; A97; D13; G06; P84

International Patent Class (Main): B29C-033/38

International Patent Class (Additional): A23G-001/20; A23G-001/21;

G03F-007/038; G03F-007/30

File Segment: CPI; EngPI

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